

MONTHLY WEATHER REVIEW,

OCTOBER, 1880.

(General Weather Service of the United States.)

WAR DEPARTMENT,

Office of the Chief Signal Officer,

DIVISION OF

TELEGRAMS AND REPORTS FOR THE BENEFIT OF COMMERCE AND AGRICULTURE.

INTRODUCTION.

In preparing this REVIEW the following data, received up to October 14th, have been used, viz: the regular tri-daily weather charts, containing the data of simultaneous observations taken at 144 Signal Service stations and 15 Canadian stations, as telegraphed to this office; 162 monthly journals and 160 monthly means from the former, and 15 monthly means from the latter; reports from 8 Sunset stations; 203 monthly registers from Voluntary Observers; 42 monthly registers from United States Army Post Surgeons; Marine Records; International Simultaneous Observations; monthly reports from Voluntary Observers in, and the local Weather Service of, Missouri; reliable newspaper extracts; special reports.

BAROMETRIC PRESSURE.

The general distribution of barometric pressure as exhibited on Chart No. II differs slightly from the mean pressure as determined from the observations for many years. The greatest variation from the mean occurs on the North Pacific coast, where the pressure is seven hundredths above the normal at Portland. The pressure has increased from three to six hundredths in all of the districts east of the Mississippi, and the area of mean high barometer which covered the Southern States in September has increased and moved north over the Middle Atlantic States and New England.

Barometric Ranges.—The barometric range for the several stations increases with the latitude and is unusually great in the Upper Mississippi valley and Upper Lake region, located near the track of the centre of the storm which passed over these regions on the 16th and 17th. The range increases on the Atlantic coast from 0.30 at Key West to 1.22 at Portland, Me., and in the Mississippi valley from 0.68 at New Orleans to 1.68 at La Crosse, this being the greatest range reported. In the Lake region the range varies from 0.89 at Rochester to 1.51 at Duluth. On the Pacific coast the range increases with the latitude but is much less than at corresponding latitudes on the Atlantic coast.

Areas of High Barometer.—Nine areas of high barometer have appeared within the limits of the Signal Service stations during the month of October, four of which—Nos. II, V, VII and IX were traced from the north Pacific to the Atlantic coast. No. VI apparently developed in the Southwest and followed the general direction of the storm of the 16th and 17th, being preceded by the most severe "norther" of the month on the Texas coast.

No. I.—This area was central near Philadelphia on the morning of the 1st and extended along the Atlantic coast from Maine to Florida, and from the Atlantic coast westward over all districts east of the Mississippi river. The general direction of the movement was to the east southeast, but the advance to the east was much retarded near the coast, the winds shifting to the east and south on the 2nd. Clear weather with slowly rising temperature prevailed in the eastern portion of the United States during the 2nd and 3rd as the area passed to the east over the Atlantic. The course of this area, previous to the 1st, has been given in the REVIEW for September, where it is described as No. VI.